In the Claims:

1. (Currently Amended) A flash-based unit for providing code to be executed by an external processor that is in communication with the flash-based unit by a first bus, the flash-based unit comprising:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory;

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component; ~~and~~

(c) a logic, separate from the external processor, for receiving a command to move said at least portion of the code from said flash memory to said volatile memory component; and

(d) a second bus, separate from said first bus, whereby said logic moves said at least portion of the code from said flash memory to said volatile memory component.[[.]]

2. (Canceled)

3. (Original) The flash-based unit of claim 2, further comprising:

(d) a power storage for storing at least a limited amount of power for supplying power to the flash-based unit if power is not otherwise available, power being drawn from said power storage when said logic determines that said power is not otherwise available.

4. (Original) The flash-based unit of claim 3, wherein said power storage provides only sufficient power to write data in said volatile memory to said flash memory.

5. (Original) The flash-based unit of claim 4, wherein said power storage is a capacitor.

6. (Original) The flash-based unit of claim 1, comprising a single chip for containing all components of the flash-based unit.

7. (Original) The flash-based unit of claim 1, comprising a single die for containing all components of the flash-based unit.

8. (Original) The flash-based unit of claim 1, wherein said flash memory only permits data to be read in one or more specific sizes of blocks.

9. (Original) The flash-based unit of claim 8, wherein said flash memory is a NAND-type flash memory.

10. (Original) The flash-based unit of claim 1, wherein said volatile memory component is selected from the group consisting of S-RAM and D-RAM.

11. (Original) The flash-based unit of claim 1, wherein the executable code is boot code.

12. (Currently Amended) A system for executing code from a restricted non-volatile memory, the restricted non-volatile memory being characterized in that code cannot be directly executed from the restricted non-volatile memory, the system comprising:

(a) a CPU for executing the code;

(b) a first bus;

(~~b~~c) a volatile memory component, in direct communication with the restricted non-volatile memory via said first bus, for holding at least a portion of the code to be executed, said at least a portion of the code being transferred from the restricted non-volatile memory, such that said CPU executes said at least a portion of the code from said volatile memory component; ~~and~~

(e~~d~~) a logic, separate from said CPU, for receiving a command to move said at least portion of the code from the restricted non-volatile memory to said volatile memory component; and

(e) a second bus, separate from said first bus, for presenting said at least portion of said code in said volatile memory component to said CPU for execution.

13. (Original) The system of claim 12, wherein the restricted non-volatile memory is a flash memory.

14. (Original) The system of claim 13, wherein said flash memory only permits data to be read in one or more specific sizes of blocks.

15. (Original) The system of claim 14, wherein said flash memory is a NAND-type flash memory.

16. (Original) The system of claim 13, wherein said volatile memory component is selected from the group consisting of S-RAM and D-RAM.

17. (Original) The system of claim 16, wherein the executable code is boot code.

18. (Currently Amended) A system for executing code, comprising:

(a) a flash-based unit for storing the code to be executed, said flash-based unit comprising:

(i) a flash memory of a restricted type, being characterized in that the code cannot be directly executed from said flash memory,

(ii) a first bus, and

(iii) a volatile memory component for receiving a portion of the code to be executed from said flash memory via said first bus;

(b) a second bus, separate from said first bus;

(~~b~~c) a processor for executing the code, said processor receiving at least said portion of the code from said volatile memory component via said second bus; and

(~~e~~d) a logic, separate from said processor, for receiving a command to move said portion of the code from said flash memory to said volatile memory component;

wherein an additional memory component is not required for executing the code by said processor.

19. (Original) A method for booting a system, the system featuring a processor for executing boot code, the method comprising:

providing a flash-based unit in the system for storing the boot code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that code cannot be directly executed from said flash memory, and a volatile memory component for receiving a portion of the boot code to be executed, said portion of the boot code being for basic initialization of the system;

sending a busy signal to said processor;

transferring said portion of the boot code to said volatile memory component;

removing said busy signal; and

executing said portion of the boot code by said processor to boot the system.

20. (Currently Amended) A flash-based unit for providing code to be executed by an external processor, consisting essentially of:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory,

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component; ~~and~~

(c) a logic, separate from the external processor, for receiving a command to move said at least portion of the code from said flash memory to said volatile memory component; and

(d) a bus whereby at most only said flash memory, said volatile memory component and said logic communicate directly.

21. (Currently Amended) A flash-based unit for providing code to be executed by an external processor, comprising:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the external processor cannot read the code to be executed directly from said flash memory;

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component; ~~and~~

(c) a logic, separate from the external processor, for receiving a command to move said at least portion of the code from said flash memory to said volatile memory component; and

(d) a bus whereby at most only said flash memory, said volatile memory component and said logic communicate directly.

22. (Original) A method for booting a system, the system featuring a processor for executing boot code, the method comprising:

providing a flash-based unit in the system for storing the boot code to be executed, said flash-based unit comprising a flash memory of a restricted type, being

characterized in that code cannot be directly executed from said flash memory, and a volatile memory component for receiving a portion of the boot code to be executed;

transferring a first portion of the boot code to said volatile memory component, said first portion of the boot code being for basic initialization of the system and containing a command for copying a second portion of the code; and

executing said first portion of the boot code by said processor to boot the system.

23. (Original) The method of claim 22, further comprising the step of:

transferring a second portion of the code to said volatile memory component for booting the system.

24. (Original) A flash-based unit for providing boot code to be executed by an external processor, comprising:

(a) a flash memory for storing the boot code to be executed, said flash memory being of a type such that the boot code cannot be executed in place from said flash memory; and

(b) a volatile memory component for receiving at least a portion of the boot code to be executed, such that at least said portion of the boot code is executed by the external processor from said volatile memory component, said at least portion of the boot code being only sufficient for basic initialization of a system that includes the external processor, said volatile memory component being only large enough to store said at least portion of the boot code.

25. (Original) A system for executing boot code from a restricted non-volatile memory, the restricted non-volatile memory being characterized in that code cannot be directly executed from the restricted non-volatile memory, the system comprising:

(a) a CPU for executing the boot code; and

(b) a volatile memory component in direct communication with the restricted non-volatile memory for holding at least a portion of the boot code to be executed, said at least portion of the boot code being transferred from the restricted non-volatile memory, such that said CPU executes said at least portion of the boot code from said volatile memory component, said at least portion of the boot code being only sufficient for basic initialization of the system, said volatile memory component being only large enough to store said at least portion of the boot code.

26. (Original) A system for executing boot code, comprising:

(a) a flash-based unit for storing the boot code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that the boot code cannot be directly executed from said flash memory, and a volatile memory component for receiving a portion of the boot code to be executed, said portion of the boot code being only sufficient for basic initialization of the system, said volatile memory component being only large enough to store said at least portion of the boot code; and

(b) a processor for executing the boot code, said processor receiving at least said portion of the boot code from said volatile memory component;

wherein an additional memory component is not required for executing the boot code by said processor.

27. (Original) A flash-based unit for providing boot code to be executed by an external processor, consisting essentially of:

(a) a flash memory for storing the boot code to be executed, said flash memory being of a type such that the boot code cannot be executed in place from said flash memory, and

(b) a volatile memory component for receiving at least a portion of the boot code to be executed, such that at least said portion of the boot code is executed by the external processor from said volatile memory component, said at least portion of the boot code being only sufficient for basic initialization of a system that includes the external processor, said volatile memory component being only large enough to store said at least portion of the boot code.

28. (Original) A flash-based unit for providing boot code to be executed by an external processor, comprising:

(a) a flash memory for storing the boot code to be executed, said flash memory being of a type such that the external processor cannot read the boot code to be executed directly from said flash memory; and

(b) a volatile memory component for receiving at least a portion of the boot code to be executed, such that at least said portion of the boot code is executed by the external processor from said volatile memory component, said at least portion of the boot code being only sufficient for basic initialization of a system that includes the external processor, said volatile memory component being only large enough to store said at least portion of the boot code.

29. (New) The flash-based unit of claim 20, further comprising:

(e) a port for providing to the external processor said at least portion of the code received by said volatile memory component.

30. (New) The flash-based unit of claim 21, further comprising:

(e) a port for providing to the external processor said at least portion of the code received by said volatile memory component.

31. (New) A flash-based unit for providing code to be executed by an external processor that is in communication with the flash-based unit by a bus, the flash-based unit comprising:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory;

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is

executed by the external processor from said volatile memory component; and

(c) a logic, separate from the external processor, for moving said at least portion of the code from said flash memory to said volatile memory component upon receipt of a power-on signal.

32. (New) A system for executing code from a restricted non-volatile memory, the restricted non-volatile memory being characterized in that code cannot be directly executed from the restricted non-volatile memory, the system comprising:

(a) a CPU for executing the code;

(b) a volatile memory component in direct communication with the restricted non-volatile memory for holding at least a portion of the code to be executed, said at least a portion of the code being transferred from the restricted non-volatile memory, such that said CPU executes said at least a portion of the code from said volatile memory component; and

(c) a logic, separate from said CPU, for moving said at least portion of the code from the restricted non-volatile memory to said volatile memory component upon receipt of a power-on signal.

33. (New) A system for executing code, comprising:

(a) a flash-based unit for storing the code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that the code cannot be directly executed from said

flash memory, and a volatile memory component for receiving a portion of the code to be executed;

(b) a processor for executing the code, said processor receiving at least said portion of the code from said volatile memory component; and

(c) a logic, separate from said processor, for moving said portion of the code from said flash memory to said volatile memory component upon receipt of a power-on signal;

wherein an additional memory component is not required for executing the code by said processor.

34. (New) A flash-based unit for providing code to be executed by an external processor, consisting essentially of:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory,

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component; and

(c) a logic, separate from the external processor, for moving said at least portion of the code from said flash memory to said volatile memory component upon receipt of a power-on signal.

35. (New) A flash-based unit for providing code to be executed by an external processor, comprising:

(a) a flash memory for storing the code to be executed, said flash memory being of a type such that the external processor cannot read the code to be executed directly from said flash memory;

(b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component; and

(c) a logic, separate from the external processor, for moving said at least portion of the code from said flash memory to said volatile memory component upon receipt of a power-on signal.